Internet Addiction And Its Association With Emotional Disturbances Among Nursing Students In Malaysia

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ABSTRACT

Background: Excessive use of internet by undergraduate students can lead to problematic internet use in the form of internet addiction (IA) which may affect students' mental health and their academic performance. This study aimed to investigate. IA among nursing students.

Methods: A total of 174 nursing students from International Islamic University Malaysia Kuantan campus were recruited in the study. IA was assessed using Chen Internet Addiction Scale. Depression, anxiety and stress scale (DASS-21) was used to determine the level of depression, anxiety and stress in relation to IA.

Results: About 33.3% of the nursing students were found to have IA, while 12.6% of them at higher risk for IA. No significant differences in terms of gender and other socio-demographic factors were found. IA is significantly higher among students who were using internet for more than 40 hours per week. The mean scores for depression, anxiety and stress were significantly higher among students with IA.

Conclusions: IA is considerably high among nursing students, and it is associated with depression, anxiety and stress symptoms. Male and female students are equally affected by IA

Keywords: Internet addiction, nursing students, Malaysia

I.INTRODUCTION:

Currently internet use is globally increasing. In Malaysia, the Malaysian Communications and Multimedia Commission (MCMC) conducted the Internet Users Survey (IUS) which showed that 38.1% of internet users were between 20 to 29 years of age and the estimated number of internet users was 24.5 million people in 2016 [1]. In many universities, the availability of free unlimited internet service for the students as it is intended to improve teaching and learning process, facilitate communications and to enhance research. However, using internet excessively is associated with serious negative outcomes in relation to students' academic performance [2] , psychological well-being [3] , and quality of life [4].

The term addiction can include non-substance-related behaviours that cause problems and impairment [5]. Addiction to a substance and addiction to a behavior may look similar in their effects on behavioural patterns, emotions and physiology [6]. Internet use, gambling, eating, sex, exercise, work, and shopping are examples of behavioural addiction [7].

Internet addition (IA) is the most widely used term to describe this maladaptive internet use as it reputable to describe the behavioral problems manifesting from heavy internet use [8]. IA is an emerging disorder that recently became the focus of many studies, due to the emergence of clinical cases presenting abuse symptoms. Although IA is not included in the Statistical Manual of Mental Disorders fifth edition (DSM-5), internet gaming disorder has been incorporated into section III of DSM-5 [9,10]. It is crucial to use a validated and reliable tool in assessing IA therefor, Chen Internet addiction scale (CIAS) is one of the most reliable and valid tests that can be used to determine the prevalence of IA. It assesses five domains of Internet-related problems: compulsive use, withdrawal, tolerance, interpersonal and health consequences, and time management difficulties [11].

Assessment of emotional disturbances among students is very important since IA may affect the psychological well-being of the undergraduate students, this will make them more vulnerable to emotional disturbances such as depression, anxiety and stress.

Depression is defined by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders–5 (DSM-5) as a disorder that is characterized by persistent mood and /or markedly loss of interest in all activities in addition to at least four other symptoms within a duration of at least two weeks, these symptoms include, significant weight loss/weight gain, disturbed sleep, diminished

concentration, fatigability, psychomotor agitation or retardation, feeling of worthlessness or inappropriate guilt, thoughts of death or recurrent suicidal ideation [12]. Anxiety is a condition that is characterized by intense feeling of dread, worries and apprehension accompanied by somatic symptoms that indicate a hyperactive autonomic nervous system, also it impairs cognition and may produce distortions of perception [13]. Stress can be defined as the physiological and psychological response to events that are appraised as threatening or challenging that require adjustment [14].

Since emotional disturbances is significant among nursing students [15,16], this study aimed to determine the prevalence of IA and its association with emotional disturbances among nursing students.

METHODOLOGY:

A cross-sectional study was conducted on a sample of 174 undergraduate nursing students from International Islamic University Malaysia, Kuantan campus. Prior conducting this study, an ethical approval was obtained from the International Islamic University Malaysia Research Ethics Committee. The details of the study were fully explained, and informed consent was obtained from the participants. The participation was entirely on voluntary basis. All participants were ensured of the confidentiality and the gathered information will only be used for research purposes.

The participants inclusion criteria are students who agreed to participate in the study and who were able to use the internet.

In this study, we used Chen Internet Addiction Scale CIAS to assess the prevalence of IA. CIAS is a self-report instrument used to determine IA that is composed of 26 items rated on a 4-point Likert scale. It assesses five domains of Internet-related problems: compulsive use, withdrawal, tolerance, interpersonal and health consequences, and time management difficulties. Scores range from 26 to 104. Higher CIAS scores indicated high severity of addiction to Internet activity [11]. The cut-off point of 63/64 and 67/68 of the CIAS were considered to be the best for screening and diagnosis of IA among college students respectively, meaning that 26-63 shows normal use, 64-67 indicates at risk use and need for screening and 68-104 indicates IA [17].

The emotional disturbances were assessed by using the Depression Anxiety, Stress Scale (DASS-21) which is a short version, self- rated questionnaire that is designed to assess the severity of the symptoms of depression, anxiety and stress; it consists of statements referring to the past week. Each item is scored on a 4-point scale (0 = Did not apply to me at all, 1= Applied to me to some degree, or some of the time, 2 =Applied to me to a considerable degree, or a good part of time, and 3 = Applied to me very much or most of the time).Subjects were asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items. Each subscale was categorized into normal, mild, moderate, severe and extremely severe [18].

The socio-demographic characteristics of the participants were obtained; the gathered information was about the nationality, age, marital status, gender, year of study, accommodation during study and household income.

Statistical Analysis

We used the statistical package for social science program, version 24.0 (SPSS 22.0) for analyzing the data. The analysis of qualitative variables such as age group, gender, nationality, monthly household income, marital status, year of study and type of accommodation were presented in number and percentage. Mann-Whitney U test and Kruskal-Wallis test were used to determine the association of important socio-demographic characteristics and emotional disturbances in the form of DAS symptoms with the IA among the students. P values less than 0.05 was considered statistically significant

RESULTS:

A total of 174 nursing students were recruited in this study. The distribution of students according to the rear of study were 47, 30, 55 and 42 students participated from year1, year2, year3 and year4 respectively. Most of the students were females, aged above 22 years, Malaysian, single, living in the hostel with low monthly household income ranged.

Although the mean score for CIAS was slightly higher among female than male students, the results was not statistically significant.

Year1 students had higher mean score of CIAS compared to other years, however, it was not significant. There were no significant differences in CIAS scores in relation to accommodation, household incomes, marital status, and social interaction.

Students who used internet more than 40 hours per week had significantly higher CIAS mean score (P < 0.05). (Table 1).

In this study, about 33.3% of the nursing students were found to have IA, while 12.6% of them at higher risk for IA. (table 2).

Among students with IA, the mean scores for depression, anxiety and stress symptoms (14.34, 18.14 and 17.66 respectively) were significantly higher than those with no IA (P<0.05).

Table 1: Socio-demographic factors and its association with internet addiction

	Total n (%)	CIAS mean score	P-value
Gender			
Male	31 (17.8)	62.2	0.56
Female	143 (82.2)	63.5	
year of study			
Year 1	47(27.1)	65.12	0.64
Year 2	30 (17.2)	62.43	
Year 3	55 (31.6)	61.98	
Year 4	42 (24.1)	63.50	
Family monthly income			
Low	82 (47.1)	63.31	0.91
Middle	62 (35.7)	62.85	
High	30 (17.2)	64.03	
Marital status			
Married	4 (2.3)	68.50	0.39
Single	170 (97.7)	63.15	
Accommodation			
Hostel	169 (97.1)	62.9	0.09
Not in hostel	5 (2.9)	75.0	
Social interaction			
Socially active	114 (65.5)	63.72	0.90
Socially inactive	60 (34.5)	62.41	
Time of internet use per week			
> 40 hours	67 (38.5)	67.61	0.00
20-40 hours	83 (47.7)	61.65	
< 20 hours	24 (13.8)	56.79	

Table 2: Prevalence of internet addiction (IA) among nursing students.

Status of IA	Number (%)
No internet addiction	94 (54.1)
At high risk	22 (12.6)
Having internet addiction	58 (33.3)
Total	174 (100)

Table 3: Association of Internet addiction (IA) with depression, anxiety and stress symptoms:

	Total No. (%)	Mean Depressive Level	P Value	Mean Anxiety Level.	P Value	Mean Stress Level	P Value
Status of IA							
Having IA	58 (33.3)	14.34	0.003	18.14	0.002	17.66	0.001
No IA	116 (66.7)	10.03		13.09		13.31	

DISCUSSION:

In this study, the prevalence of IA among nursing students was 33.3% while 12.6% were at higher risk for addiction which is higher than among medical students in the same university as the prevalence of IA was found to be 22.8% and 12.3% of the students were at higher risk for addiction [19] but is slightly higher other study among allied health students found the rate to be 31.8% [20]. However, it is lower than that in other previous study among medical students in Malaysia using internet addiction test in which the rate was found to be 36.9% [21]. A previous review in assessing IA has revealed that prevalence rates range from 0.8% to 26.7% because of different assessment tools and cut-offs [22]. Other previous studies on IA using CIAS among college students in Pakistan and Taiwan revealed that the prevalence was 28% and 17.9% respectively [23, 24]. Other factors which may affect the prevalence of IA includes sample size, whether using validated tool or not, sampling method and cultural differences.

Regarding association of gender with IA studies across the world showed varied results. In some studies, IA is associated with male gender [20, 21, 24, 25] but in a study done in Japan the rate of IA is more among females [26]. In this study, there was no statistically significant difference in IA between male and female students which is similar to the findings in previous studies in Malaysia [27, 28], Vietnam [29] and India [30].

IA was significantly higher among nursing students who were using internet for more than 40 hours per week which is similar to the previous findings among dental students in Malaysia [31].

In this study IA was significantly associated with Depression, anxiety and stress symptom which is similar to previous findings in other studies [19, 20, 32].

Although cross-sectional study is reliable in determining associations between study variables, it is incapable to determine the causal relationship between AI and depression, anxiety and stress. However, students with IA may be at higher risk to develop depression, anxiety and stress and on the same time, it is also possible that emotional disturbances can precipitate or worsen IA.

Therefore, it is advocated to undergo prospective cohort studies to assess the causality between IA and emotional disturbances.

CONCLUSION:

Internet addiction is considerably high among nursing students and it is associated with depression, anxiety and stress symptoms Male and female students are equally affected by internet addiction. Internet addiction is significantly higher among students who are heavy internet users.

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CONFLICT OF INTEREST STATEMENT:

The authors declare no conflict of interest

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